

Mobil Rarus SHC 1020 Series

Rotary Air Compressor and Turbocharger Lubricants

Product Description

The Mobil Rarus SHC 1020 Series is a line of supreme performance oils primarily intended for the lubrication of severe duty rotary screw compressors, vane air compressors, and turbochargers. They are particularly suited for marine and industrial applications subjected to high final compression temperatures or where extended oil drain intervals are desired. They are formulated with design-specific wax-free synthetic hydrocarbon fluids and a high technology additive system that assures exceptional resistance to oxidation and thermal degradation far superior to mineral oil-based air compressor oils. They provide outstanding equipment protection and reliability for compressors operating under conditions where other air compressor oils are not meeting expectations. Mobil Rarus SHC 1020 Series provide excellent wear protection and outstanding resistance to oxidation and thermal degradation, greatly superior to mineral oils. Their unique formulation provides the ability to reduce maintenance costs through minimising equipment problems and downstream deposits and carryover. Their high viscosity index ensures effective lubrication at high temperatures.

Mobil Rarus SHC 1020 Series lubricants significantly reduce the potential for fires and explosions when compared to mineral oil-based products. They exhibit a virtual absence

of deposit formation and high autogeneous ignition temperatures improving both performance and safety. Their exceptional water separating characteristics reduce problems with emulsion formation coalescers and filters reducing the need for frequent maintenance.

Features & Benefits

A general trend in air compressor design over the years has been to higher power output, which can lead to greater thermal stress on the lubricant. In severe applications, continual intermixing occurs between the lubricant and the air being compressed. Within trapped air bubbles in the lubricant, temperatures can rise more than 100°C. In turbocharger applications, bearing lubricants encounter extremely high temperatures which thin the lubricant and leads to coking of lesser quality mineral and synthetic lubricants. The use of the Mobil Rarus SHC 1020 Series oils can result in lower deposits and cleaner compressors and turbochargers compared to conventional mineral oils, resulting in longer running periods between maintenance intervals. Their excellent oxidation and thermal stability and ability to control sludge and deposit formation safely allow extended oil life capability. They possess outstanding antiwear and corrosion protection, which enhances equipment life and performance.

Key features and potential benefits include:

Features	Advantages and Potential Benefits
High performance synthetic basestocks	Wide temperature range capability Significant performance capabilities relative to mineral oils Improved safety Extended service life
Outstanding oxidation and thermal stability	Reduced coking deposits Longer oil life Improved filter life Lower maintenance costs
High load-carrying ability	Reduced wear of bearings and gears
Excellent water separability	Less carryover to downstream equipment Reduced sludge formation in crankcases and discharge lines Reduced blockage of coalescers, inter- and after-coolers Less potential for emulsion formation
Effective rust and corrosion protection	Improved protection of internal compressor components

Applications

The Mobil Rarus SHC 1020 Series oils are recommended for all rotary screw and vane air compressors. They are particularly effective in screw-type compressors with oil injection cooling (a design which places especially high demands on the compressor lubricant) and for continuous high temperature operation with discharge temperatures up to 200°C. Mobil Rarus SHC 1020 Series oils are recommended for units with a history of excess oil degradation, poor valve performance, or deposit formation. They are compatible with all metals used in compressor construction and with conventional mineral oil-based air compressor oils, but admixture with other oils may detract from the total performance capability.

Mobil Rarus SHC 1020 Series oils are not recommended for air compressors used in breathing air applications.

Mobil Rarus SHC 1026 is the preferred lubricant for marine diesel engine turbochargers. Its superior performance is confirmed by its approval by ABB Turbo Systems for oil change intervals of five times that permitted with any mineral oil lubricant.

Health & Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application, following the recommendations provided in the Material Safety Data Sheet (MSDS). MSDSs are available upon request through your sales contract office, or via the Internet on <http://www.exxonmobil.com>. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

Typical Properties

Mobil Rarus SHC	1024	1025	1026
ISO Viscosity Grade	32	46	68
Viscosity, ASTM D 445			
cSt @ 40°C	31.5	44	66.6
cSt @ 100°C	5.7	7.2	10.1
Viscosity Index, ASTM D 2270, min	127	131	136
Copper Strip Corrosion, ASTM D130, 24 h @ 100°C	1B	2A	1B
Rust Characteristics Proc A, ASTM D 665	Pass	Pass	Pass
Pour Point, ASTM D 97, °C, max	-39	-39	-39
Flash Point, °C, ASTM D 92	245	246	246
Specific Gravity 15°C/15°C, ASTM D 1298	0.846	0.849	0.856

Due to continual product research and development, the information contained herein is subject to change without notification. Typical properties may vary slightly.